

Amendments to the Drawings:

Please amend Figs. 1, 4, 5, 8, 9-12 and 19 as shown in the attached drawings marked up to show the changes. Replacement sheets are included.

Figs. 1, 4, 5, 8, 9-12 and 19 have been amended to show elements labeled with indicia indicative of their function as requested by the Examiner in the Office action of February 10, 2006.

Attachment: Replacement Sheets (9 sheets)
Annotated Sheet Showing Change(s) (9 sheets)

Remarks

Reconsideration of this application is requested in view of the foregoing amendments and the following remarks.

The status of the claims is as follows:

Claims 1-53, and 89-106 are pending and have been rejected; and

Claims 54-88, and 107-122 have been withdrawn from consideration.

The drawings have been amended to insert labels as required by the examiner. These labels are the same identifiers as in the specification for the reference numbers. No additional matter is added and it is believed that the drawings are now in compliance with the rules. Any further objection to the drawing is unwarranted.

The specification has been amended to correct an obvious typo in identifying the drawing reference number 418, and by removing a sentence that was a combination of two other sentences and was confusing. No new matter has been added.

The examiner has rejected claims 4, 5, 23, 31, and 32 under 35 U.S.C. §112, second paragraph. This rejection as it applies to the amended claims is traversed. Claims 4, 5, 31, and 32 have been rewritten to place them in proper form. It is clear that a further method limitation is set out in these claims. Also claim 23 is now dependent on claim 2. This provides antecedent basis for the term “the cup.” Any further rejection of these claims would appear unwarranted.

The examiner has rejected claims 1, 5, and 6 under 35 U.S.C. §102(e) as anticipated by U. S. Patent No. 6,877,239, Leitner et al., hereafter “Leitner.” This rejection is traversed.

Leitner fails to disclose each and every element of claim 1, and therefore also claims 5 and 6 that are dependent on claim 1. In particular, Leitner does not disclose the step of “constructing a three dimensional model of the joint intra-operatively using the surgical navigation system based on the patient’s anatomical landmarks.” There is no disclosure of constructing a model of a joint at any time in Leitner. Leitner is concerned with relative movement or displacement of a tracking device. Further, there is no disclosure in Leitner of the step of “determining the range of motion of the joint.” For at least these reasons, any further rejection of claims 1, 5, and 6 based on Leitner is unwarranted and should be withdrawn.

The examiner has also rejected claims 1-5, 7, 8, 14, 15, 21-26, 28-32, 35, 41, 42, and 89-103 under 35 U.S.C. §103(a) as unpatentable over U. S. Patent No. 6,923,817, Carson et

al., hereafter "Carson," in view of U. S. Patent No. 6,645,251, Salehi et al., hereafter "Salehi." This rejection is respectfully traversed.

Applicants disagree with the examiner's characterization of the disclosure of Carson. Carson does not disclose a method as claimed in the rejected claims with the exception of the placement of stems and the use of sagittal and coronal planes. There is no disclosure of the construction of a model intra-operatively in Carson. Carson does have some discussion in the background of "imageless" methods that digitize a number of points in a joint, see Column 4, lines 20-27. However, this disclosure of these imageless systems fails to disclose the creation of a model of the joint. Further, Carson fails to disclose determining the range of motion of the joint. Carson is directed to a system and method that uses a radiographic technique to locate and define the anatomical structure. The brief disclosure of the imageless systems primarily describes the perceived disadvantages of these systems. This disclosure would not motivate a person skilled in the art to construct a three dimensional model of a joint intra-operatively. Carson fails to disclose or suggest this basic step of the method as claimed. The broadest reading of Carson does not provide any description of the modeling step nor does Carson provide motivation to do so from the description of digitizing structure. Therefore, Carson alone or in combination with any other reference does not disclose or suggest the methods as claimed.

Salehi does not remove the inherent deficiencies of Carson. Salehi deals solely with a joint implant. There is no disclosure of the method of preparing the joint as set out in the present claims under examination. A person of ordinary skill at the time the present invention was made would not have been motivated to combine Carson with Salehi in the manner the examiner has done and even if they were so motivated, that person would not have come up with the invention as claimed. Therefore, the rejection of the claims based on the combination of Carson with Salehi is unwarranted and should be withdrawn.

The examiner has also rejected claims 1-12, 14-39, 41-53, and 89-106 under 35 U.S.C. §103(a) as unpatentable based on Carson in combination with DiGioia, Clin. Ortho. Number 335, pages 8-22, hereinafter "DiGioia." This rejection is respectfully traversed.

Carson has been discussed above. DiGioia describes a pre-operative planning process and method. The method of DiGioia is based on scans and is not based on locating anatomical landmarks of the patient intra-operatively. DiGioia does not suggest the methods as claimed either alone or in combination. There is no description of intra-operative model

preparation in DiGioia and therefore, DiGioia does not remove the inherent deficiencies of Carson. Therefore, this rejection should be withdrawn.

The examiner has also rejected claims 13, and 40 under 35 U.S.C. §103(a) as unpatentable based on either Carson in combination with Salehi or Carson in combination with DiGioia, both as applied to other claims in further combination with U. S. Patent No. 6,162,257, Gustilo, et al., hereafter "Gustilo." This rejection is traversed.

Gustilo discloses a prosthetic acetabular cup but does not disclose any methodology relative to placement or location of this cup. Gustilo is directed to a mechanical solution to a thin pelvis wall by providing extensions to be attached to solid bone. There is no disclosure of the subject matter of claims 13 and 40 in Gustilo and Gustilo does not remove the inherent weakness of the rejections based on Carson in combination with either Salehi or DiGioia. Therefore, this rejection is unwarranted and should be withdrawn.

The examiner has also rejected claims 1-53 and 89-106 provisional under the judicially created obviousness double patenting. Because no claims have been found allowable in either the present application or in Serial No. 10/732,553, the examiner is requested to hold this rejection in abeyance until allowable claims are found. At that time, Applicants will submit an appropriate terminal disclaimer.

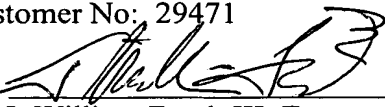
It is believed that all rejections and objections have been overcome and therefore an indication of allowability is respectfully requested.

An early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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Registration No. 25,626

Appl. No. 10/655,922
Amdt. A dated June 12, 2006
Reply to O.A. of February 10, 2006

Atty. Docket No. 29997/062

APPENDIX



FIG. 1

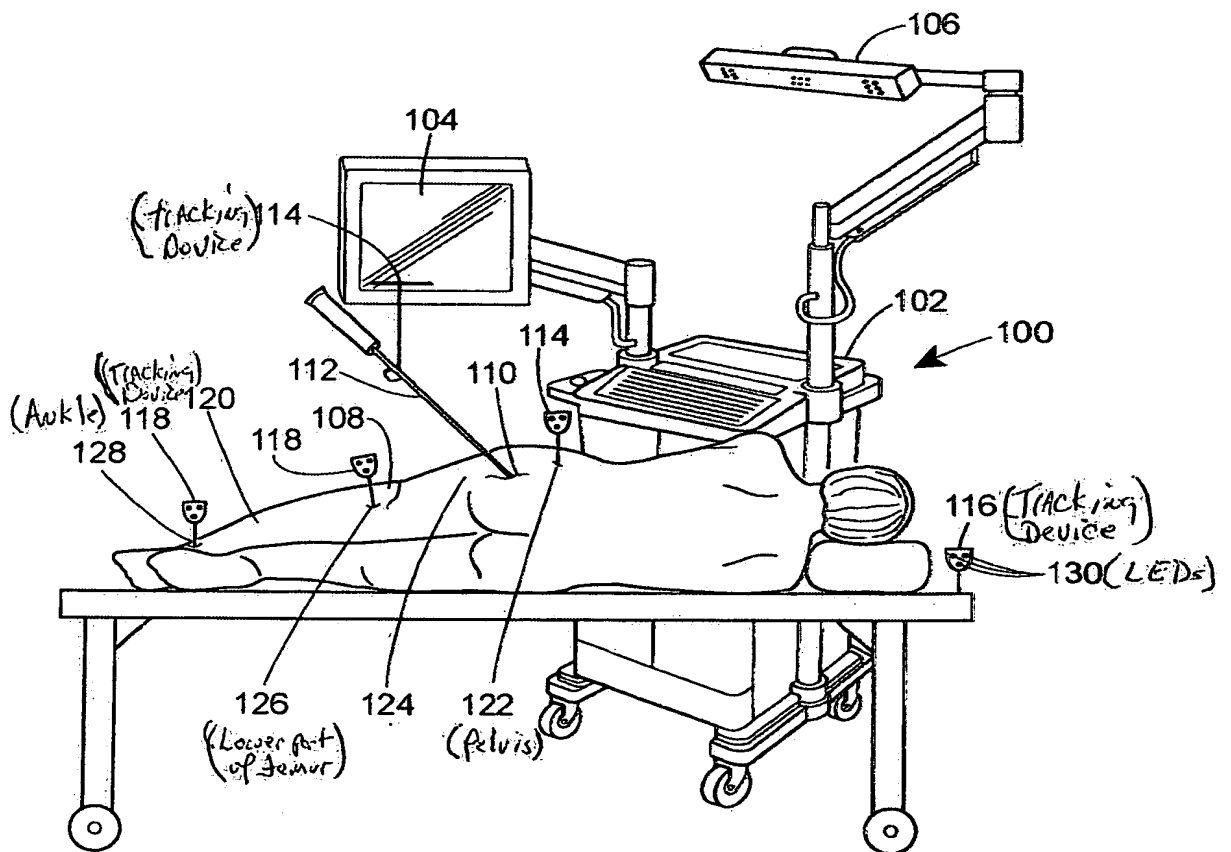


FIG. 4

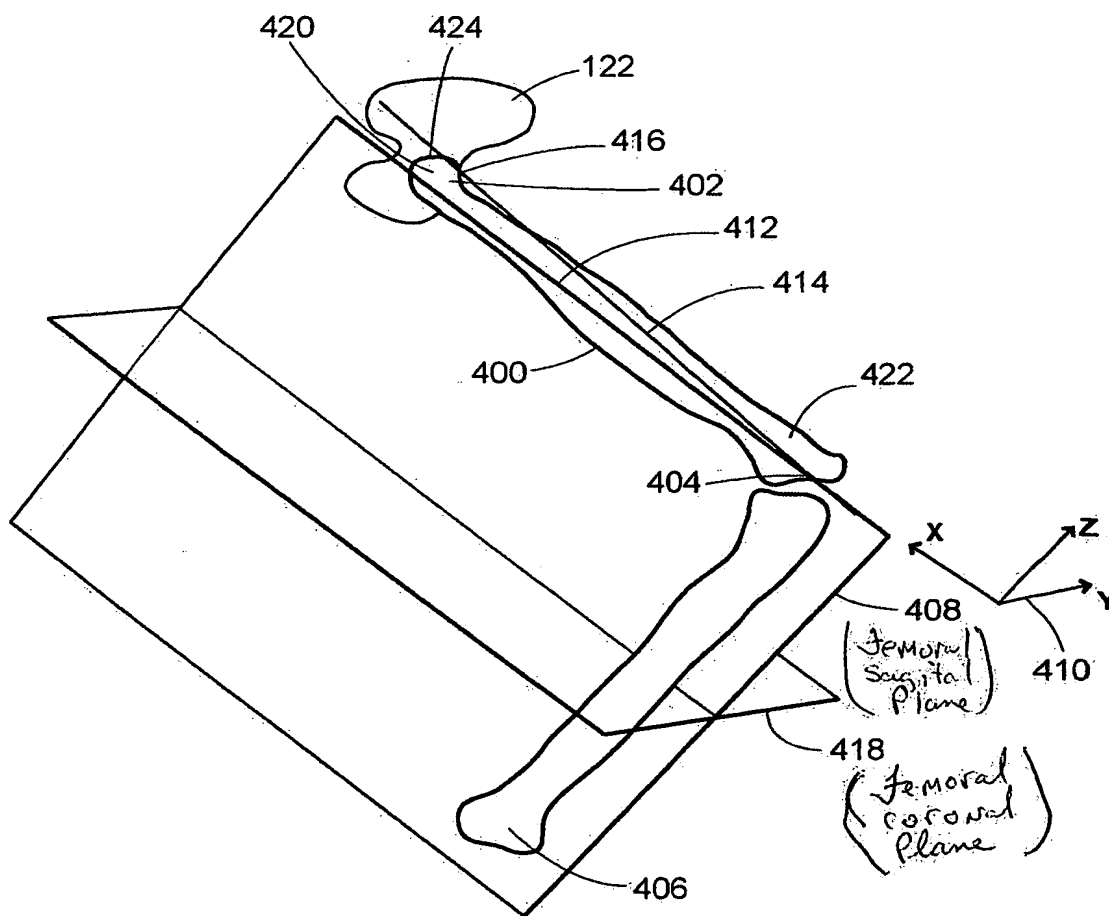


FIG. 5

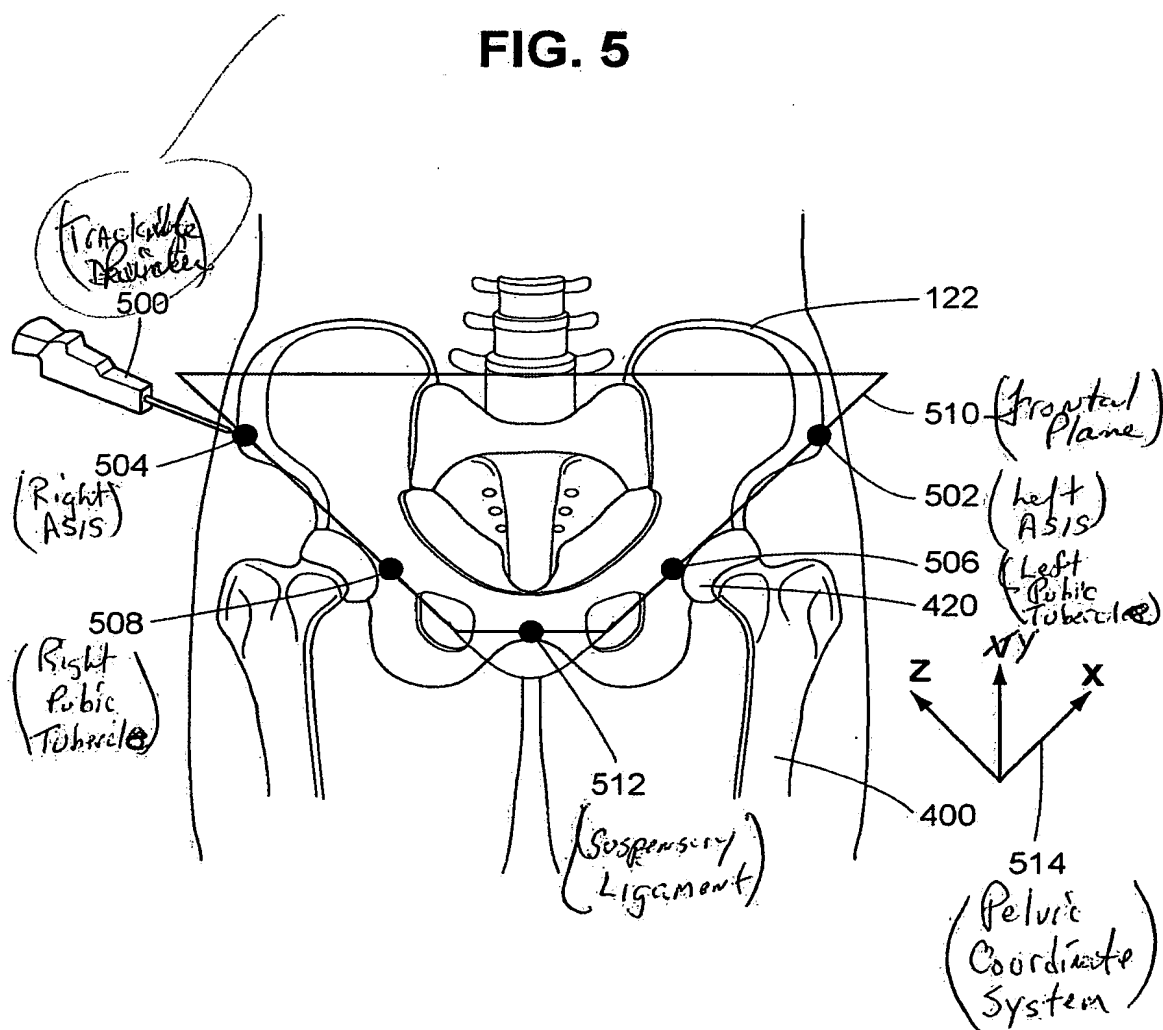


FIG. 8

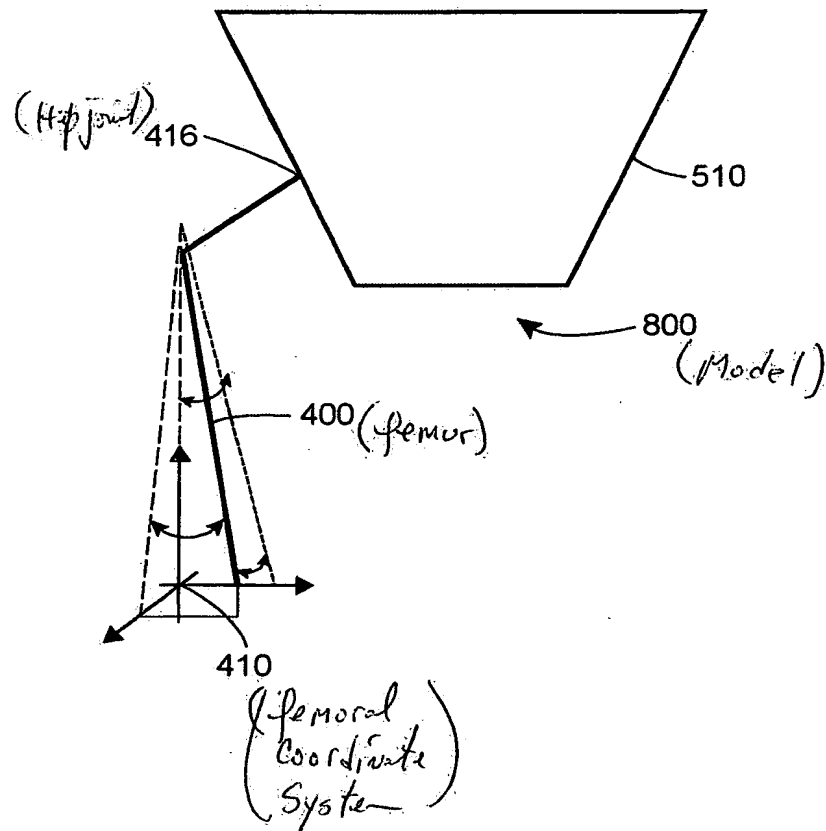


FIG. 9

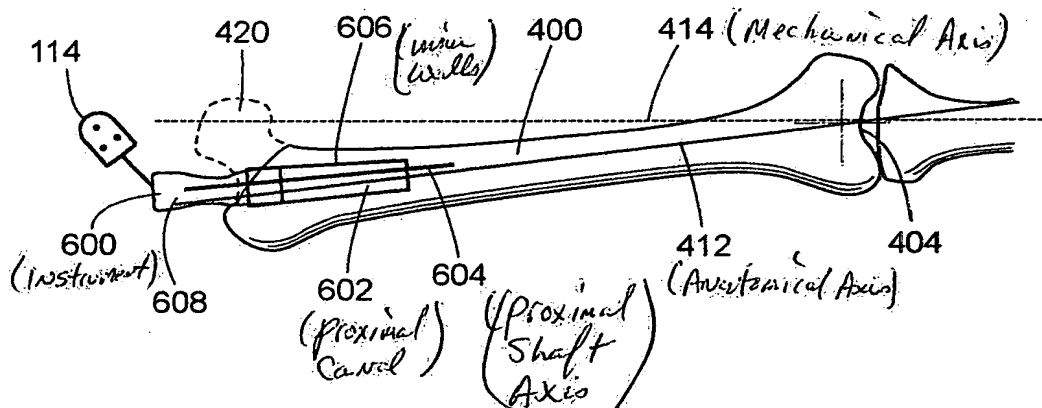


FIG. 10

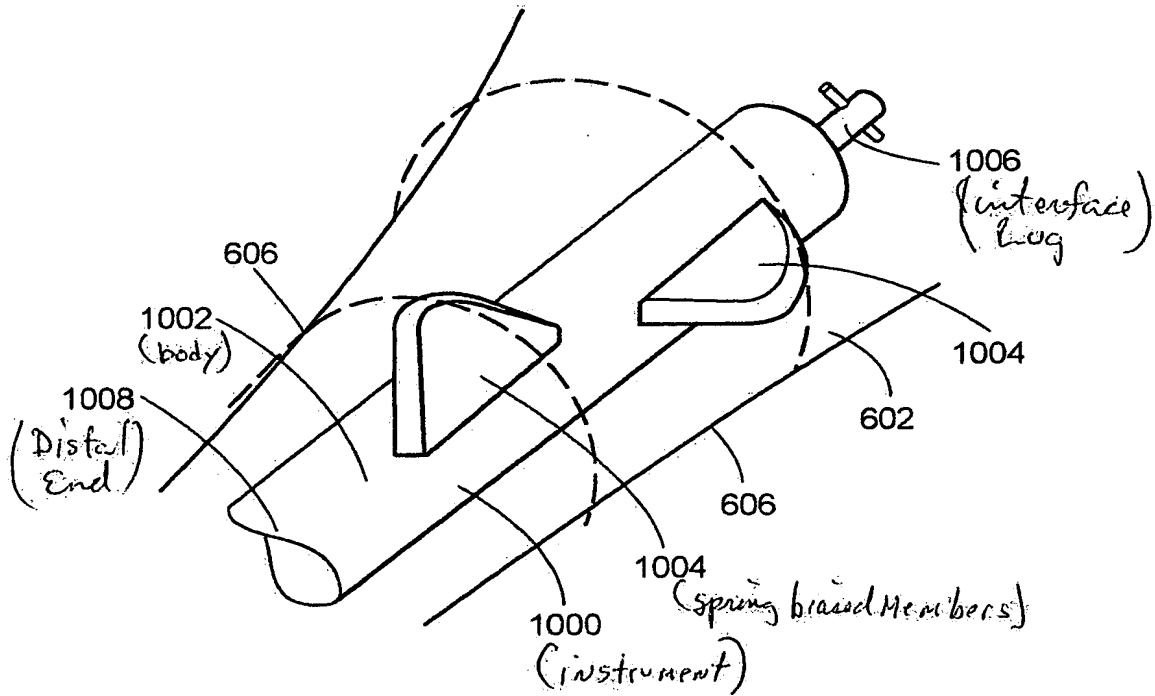


FIG. 11

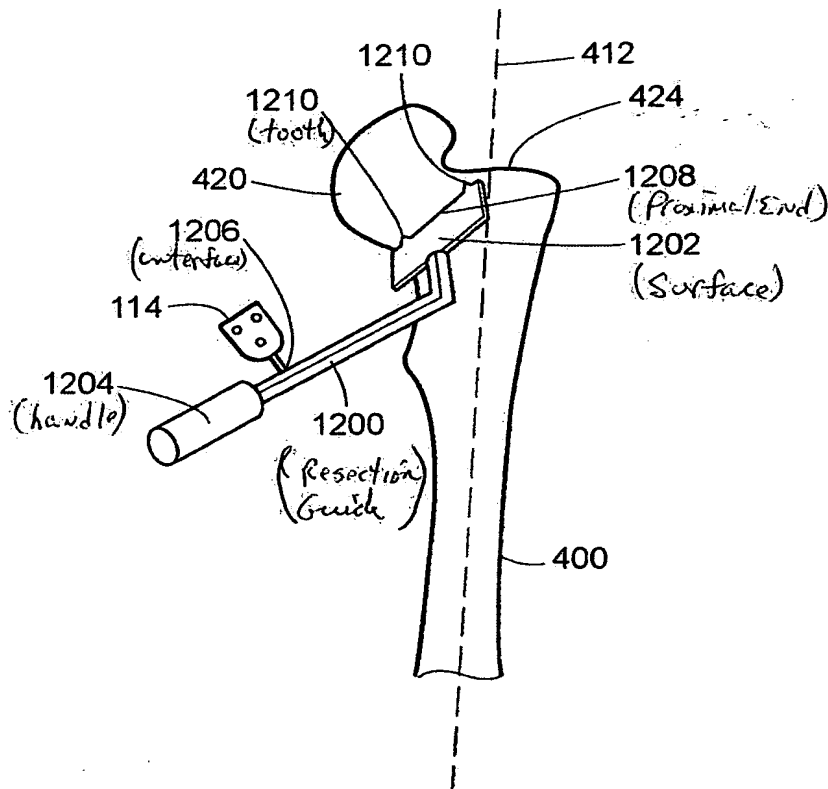


FIG. 12

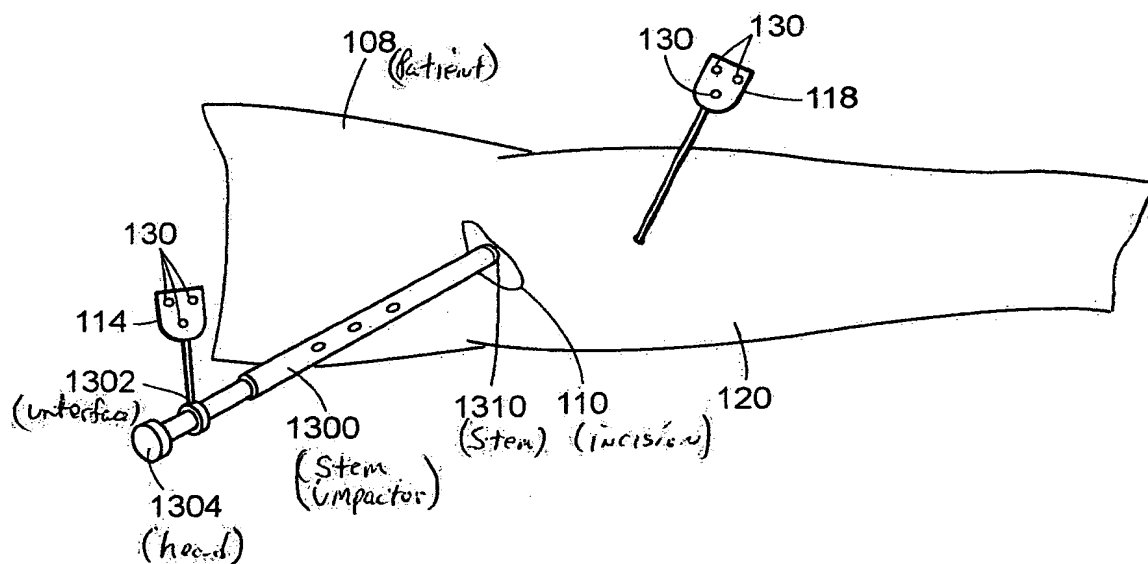


FIG. 19

